

**BROWN COUNTY
PUBLIC WORKS DEPARTMENT**

SPECIFICATIONS FOR
ONE (1) SINGLE-AXLE ONE-WAY DUMP BODY,
HYDRAULIC SYSTEM, & SALT SPREADER CONTROLS

Name of Company Submitting Proposal

Street Address

City, State & Zip

Certified/Cashier's Check or Bond #: _____

Amount of Check or Bond: \$ _____

Name of Bank: _____

(To Be Filled In By Vendor)

SUBMIT TO:

BROWN COUNTY PUBLIC WORKS
Highway Duck Creek Office
2198 Glendale Avenue
Green Bay, WI 54303

PROPOSAL DEADLINE: FEBRUARY 6, 2020 – 2:00 p.m.

This specification shall be returned in its entirety to the Brown County Public Works Department.
Instructions contained herein shall be adhered to.

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ADVERTISEMENT FOR PROPOSALS

Sealed proposals will be received by the Brown County Public Works Department at the Main Highway Shop Office at 2198 Glendale Avenue, Green Bay, Wisconsin, 54303, until **2:00 p.m., Thursday, February 6, 2020**, for the following equipment:

ONE (1) ONE-WAY DUMP BODY, HYDRAULIC SYSTEM,
AND SALT SPREADER CONTROLS
TO BE FURNISHED AND DELIVERED TO THE BROWN COUNTY PUBLIC
WORKS DEPARTMENT FOR INSTALLATION ON A NEW
2021 SINGLE-AXLE DUMP TRUCK

The Public Works Department reserves the right to reject any or all proposals submitted, or to accept any part or combination thereof, to waive any technicalities, and to accept any proposal deemed most advantageous to Brown County.

Proposals shall be submitted on Brown County Public Works Department forms and specifications; which may be obtained by accessing the Brown County website @ [www.browncountywi.gov/Departments/Public Works/Highway/Bids & RFP's](http://www.browncountywi.gov/Departments/Public%20Works/Highway/Bids%20&%20RFP's).

Any proposal submitted after the date and time specified will be rejected.

A certified check, cashier's check, or bid bond payable to the Brown County Public Works Department in the amount of not less than five percent (5%) of the quotation, shall accompany each quotation as a guarantee that if the quotation is accepted, the proposer will carry out the provisions of the proposal.

FOR: BROWN COUNTY PUBLIC WORKS DEPARTMENT

BY: PAUL A. FONTECCHIO, P.E.
Director

SPECIAL PROVISIONS

The Brown County Public Works Department will receive sealed proposals for furnishing and delivering **ONE (1) ONE-WAY DUMP BODY, HYDRAULIC SYSTEM, AND SALT SPREADER CONTROLS** to be installed by Brown County on a new 2021 single-axle truck.

Proposals shall be submitted on forms provided by, and addressed to, the Brown County Public Works Department, 2198 Glendale Avenue, Green Bay, Wisconsin, 54303, and marked "Proposal #4-20 – Dump Body and Hydraulics". Proposals will be received until **2:00 p.m., Thursday, February 6, 2020**, at the Main Highway Shop Office.

These specifications are a part of the proposals and shall remain attached to same. Proposals shall be accompanied by **a certified or cashier's check** in the amount of not less than five percent (5%) of the quotation, made payable to the Brown County Public Works Department as a guarantee that the terms of the proposal will be carried out by the company submitting same. **Bid bonds** will also be acceptable.

All supplies or equipment sold to Brown County shall be sold at the risk of the contractor or seller until accepted by the Brown County Public Works Department. **Terms of Payment:** No payment will be made until after inspection and acceptance by the Public Works Department or their agent.

The Public Works Department reserves the right to reject any or all proposals submitted, or to accept any part or combination thereof, to waive any technicalities, and to accept any proposal deemed most advantageous to Brown County.

Should the U.S. Government, by its action, affect or prevent a vendor from fulfillment of the terms of his proposal, he should immediately furnish proof of same in writing. Upon receiving such proof, vendor will be released from his contract, and his check or bond will be returned.

All proposals shall be firm proposals for at least 45 days from proposal opening date.

Proposals shall be on specifications as herein furnished and shall not be altered.

Checks or bonds will be returned to unsuccessful proposers upon acceptance of the successful proposal, or within 45 days of opening of proposals.

The deposit of the successful proposer will be returned to him upon performance of all conditions of the proposal, or forfeited to Brown County Public Works Department in case of failure to comply with said proposal conditions.

Brown County is exempt from Federal Excise Tax, but if there is a tax, it shall be shown in the proposal.

Proposer shall indicate full information as requested in spaces provided hereinafter.

More than one proposal may be submitted if submitted on a Brown County specification form. Separate proposals shall be used for each model proposed.

Delivery of all components contained within this proposal shall be received by Brown County within ninety (90) days of the written bid award to the successful bidder.

MINIMUM SPECIFICATIONS

BODY:

Shall be U.S. manufactured 9 to 10 yard box, heavy-duty model, and shall have the following:

1. Smooth sides with no horizontal or vertical bracing on the sides.
2. 10 feet long and 7 feet wide (inside).
3. Cab protector to be a minimum of 84" wide and 30" deep and made of 10-gauge 201 stainless steel.
4. Entire body, other than the floor, constructed of stainless steel.
5. Floor made of 3/16" AR450 steel; 190,000 psi tensile strength 150,000 psi yield strength.
6. Crossmemberless design.
7. Fully boxed stainless steel tube top rails and long members, with dirt shedding 201 stainless angle iron on both sides & tailgate.
8. 1/4" 304 stainless steel longmembers.
9. Sloping one-piece sides, 48" to 42" made of 3/16" 201 stainless steel.
10. Constructed with rear corner post made of 3/16" 201 stainless steel.
11. Stainless walk rail step on left rear corner with grab handles above the steps.
12. A factory installed 4" ID x 4 3/4" OD pipe through the right side long member above the rear hinge.
13. Capability of discharging by conventional dump.
14. No holes are to be cut into box for lighting or spreader chains.
15. All welds shall be continuous and welded 100% throughout – **NO SEAMS SHOWING & NO SKIP WELDING.**
16. Longsills and rub rails internally rust-proofed and resealed.
17. Cross shaft, over center mechanism between long sills along with all hardware below floor to be 201 stainless steel.
18. Body with a minimum 5-year warranty.

Complete body shall be dirt shedding and have an adjustable mercury switch to limit the maximum box height.

LIGHTING:

Vendor shall provide four (4) Grote 54672 stop & tail lights.

TAILGATE:

Shall be heavy-duty, double panel, with a 3/16" AR450 high-tensile steel inner panel and 7 gauge 201 stainless steel outer panel with a minimum 1 1/4" top pins and 1 1/2" upper hinges. Shall have a lift loop for tailgate removal. Tailgate lock shall be air-operated (part number 29-350X8) Tectron air cylinder with the cylinder retracted when tailgate is in lock position. Shall have an electric-over-air tailgate lock and control valve for mounting under the hood. All hardware above and below floor shall be stainless steel. Extra pair of 1 1/2" upper tailgate hinges to be included.

BOX HOIST:

Shall be twin-arm with one double-acting cylinder, with minimum of 7" bore. The cylinder rod shall be nitride treated to prevent corrosion. Hoist and hydraulic system shall have ample capacity to readily raise the maximum load that can be loaded upon the specified box size. Shall have a minimum lift capacity of 20 tons. Subframe shall be shot blasted and powder coated black.

The hoist frame shall include body safety props, body guides, and hinges at one end of the frame to allow the body to be tipped to the rear of the truck.

Shall have a minimum five (5) year warranty on hoist.

MINIMUM SPECIFICATIONS (continued)**HYDRAULIC PUMP & CONTROLS:**

The front-mounted pump shall be furnished. Pump shall supply a minimum of 31 GPM at 1200 RPM of engine speed. Hydraulic pump shall be an axial piston pressure and flow-compensated, load-sensing type. The pump shall be cast iron construction and rated to 6.00 cubic inches per revolution at maximum stroke. The pump shall have a minimum 2" suction line and shall be rated for up to 3,000 RPM and 3,000 PSI and require only 300 PSI for stand-by pressure, and shall have 1¼" keyed drive shaft and SAE Type C mounting flange. Shall be a Model PAVC100 Parker load-sensing pump. The hydraulic filter shall be 10 micron and rated for no less than 100 GPM. The pressure side of the pump shall have a shut-off valve. All hydraulic engineering shall be performed by Force America.

HYDRAULIC/FUEL TANK AND VALVE ENCLOSURE:

- Behind-the-cab fuel/hydraulic oil/valve enclosure integrated into one assembly
- Minimum 115-gallon fuel capacity
- Minimum 35-gallon hydraulic oil capacity
- Integrated valve enclosure with removable sides/rear panel with stainless T-handle latch
- Entire system is stainless steel
- 4-point rubber-mounted bushing to truck frame
- Tank shall be 80" wide x 18.5" deep x 34" tall
- RA9229-STW fuel sending unit
- In-tank hydraulic return line filter assembly
- Internal tank baffling for both fuel and hydraulic oil
- Grip strut step to allow for safer filling of fuel
- Basket type filler breather cap, mounted on the top of the tank
- Magnetic drain plug
- 2" NPT suction with 100 mesh screen type filter (p/n TFS2020-0-3)
- Separate return port for control drain line
- Sight and temperature gauge, externally mounted
- Fill pipe on tank shall be 1 ¼", 45 degree pipe elbow with pipe plug
- Filter shall be in tank mounted Zinga Model TS-1200-25-1-0, with indicator gauge
- Suction ports for hydraulic oil at bottom of tank shall be 2", one located close to front wall and one located close to rear wall

Required Misc. Parts:

- 2" 1/2 –turn ball valve for suction
- 2" x 2" barbed nipple
- Size 32 suction elbow and clamp kit for pump
- #16 O-ring to #16 O-ring 90 degree elbow
- #16 O-ring female to #20 O-ring male adaptor
- #16 O-ring male to #16 JIC male 90 degree

CONTROL VALVES:

The truck shall have right hand wing. Control valves shall be U.S. manufactured. Valves to be Parker MCV-ISO load-sensing, manifold-mounted, spool type, with O'ring ports.

Valve sections to be arranged in one compartment, as follows:

- 1) Hoist: double-acting cylinder with down-side relief, 21 GPM
- 2) Plow lift: double-acting cylinder, 21 GPM
- 3) Plow angle: double-acting cylinder with auxiliary cross port relief valve to protect the cylinder, 21 GPM
- 4) Right wing toe: double-acting cylinder, 21 GPM, with holding valves
- 5) Right wing heel: double-acting cylinder, 21 GPM
- 6) Sander auger: 21 GPM spool and built-in pressure compensator to operate left & right
- 7) Sander spinner: 5 GPM spool and built-in pressure compensator to operate left & right

MINIMUM SPECIFICATIONS (continued)**CONTROL CENTER:**

The Control Center must be an integral center for controlling all hydraulic functions including all automated salt controls. The unit must be supplied with separate easy to service feedback connection, speedometer connection, valve control connection, and main power connection. The center must also be supplied with color coded wiring throughout. Manuals, service literature, driver and service training must be supplied at no charge. Control Center to include the following:

Joystick Controls:

- 1) Dual Axis joystick for right wing toe and heel with blast button
- 2) Dual axis joystick for plow lift and angle with standby button
- 3) Single axis joystick for hoist with interlock

Switches needed:

- 1) Vibrator

Controls for all valve functions and electronic spreader control will be integrated into a single, self-contained control center. The control center shall be a padded armrest style that is ergonomically designed. Control center shall be modular in design for ease of installation and service, and wiring and connectors shall be keyed and color-coded throughout. All components must be durable for long life and trouble free operation.

The electronic controller shall be a fully proportional multi-stick controller to operate all cylinder functions. Multi-stick PWM driver electronics shall include as standard the capability to control at least 9 proportional outputs simultaneously. Controls for spreader must be located on armrest at the operator's fingertips. There shall also be four auxiliary rocker switches available with an additional fifth switch being the main power switch for the spreader control.

For ease of operation the multi-stick control shall include the following features: LED-backlit nomenclature for all joystick functions and a momentary push-button at the top of the hoist stick to provide hoist-interlock. The "Hoist" decal shall be illuminated amber while disabled, and change to green backlighting when the driver engages the hoist interlock button. The green "Hoist" LEDs shall remain illuminated while the hoist is under operation and shall time-out after a period of hoist inactivity that is selectable from 0 to 15 seconds.

The plow, wing, scraper, or other joysticks shall have the option to include a momentary pushbutton for activation of remote spreader standby, remote spreader blast, or electric joystick interlock. The multi-stick communication hardware/software shall include 4 integral float options. The use of add-on float modules is unacceptable. For flexibility of use the integral float programming shall have the following standard features:

Multi-stick control shall communicate all joystick data over the spreader control CAN bus. For ease of service and diagnostics the multi-stick control shall have the following easily accessible through the spreader control calibration menus:

- Unique MIN/MAX adjustments for each joystick function (forward, back, left and right)
- On-screen output status indicators for each PWM output
- Audible and visible output error status indicators with flashing error codes for each joystick function

The multi-stick control joystick outputs shall be communicated over the spreader control CAN bus to the Valve Module. Spreader control outputs and joystick control outputs shall be operated on the same Valve Module, or multiple modules as necessary. The electronic spreader control shall be designed for precise, closed-loop control of granular and prewet liquid applications and operate on a CAN Bus protocol. The Central Processing Unit (CPU) shall have keyed and color coded connections to prevent incorrect installation. The unit shall have USB connectivity for file and data transfer, Ethernet connection, a J1939 communication port for connection to the vehicle bus, a second CAN bus communication port for spreader-only data use, a J1708 connection for a road and air temperature sensor, and a RS-232 connection for AVL communication.

MINIMUM SPECIFICATIONS (continued)**CONTROL CENTER:** (continued)

The CPU shall have on-board diagnostics, which provide real-time status of CAN bus communication, processor activity, and power status. The CPU shall have a built-in audible alarm for diagnostic purposes.

The spreader control display shall be a remotely-mounted, 10" diagonal color TFT LCD with capacitive touch and a low-profile 16:9 widescreen format and minimum of 1024X600 pixel resolution. LCD shall have variable LED backlighting. CCFL backlighting is unacceptable. The display shall include a scratch-resistant polycarbonate lens with anti-glare coating. Display unit shall have a built-in audible alarm. To avoid driver distraction, the display shall have no integrated dials or pushbuttons. Display shall communicate on the spreader control system CAN bus.

The operator menus shall be color-coded to match the encoder knobs on the operator interface. The display shall be capable of displaying the following on-screen simultaneously: Granular material name, granular material set point and actual application rate including units of measure, prewet liquid name, prewet liquid set point and actual application rate including units of measure, spread width, road temperature, air temperature, material usage total, liquid usage total, vehicle speed, and current date and time. The operator shall have the option of selecting five data items to be displayed onscreen during operation. The display will also provide four warning light indicators for low oil level, body up, oil temp, and filter bypass. These warning lights are to be functional regardless of spreader operation or status.

The display shall have integrated antennas for GPS and cellular communication. Cab mounted antennas are unacceptable. The display shall be capable of communicating wirelessly with road and air temperature sensors.

The Control Center shall be a FORCE America Patrol Commander MPJC Ultra series with a 6100 model spreader control.

Other:

Manuals, along with service and parts literature shall be provided.

SENSORS:

- Shall have auger shaft mounted F128 feedback sensor.
- Shall have wireless road and air temp sensors, provided to integrate with 6100 Controller.

VIBRATOR:

Complete unit shall be a Cougar Model 3200 DC, with mounting plate and installation kit. The vibrator shall be mounted under the center of the dump body at the rear of the dog house.

PAINT & COLOR:

Subframe hoist shall be shot blasted and powder coated black. Stainless portion of body shall be left in its natural finish. Carbon portion of body shall be primed.

WELDING:

Shall be neat and workman-like. No intermittent welding – **NO SKIP WELDING.**

SAFETY EQUIPMENT:

Shall be equipped with the following:

1. A box-raised light
2. Grote 73040 back-up alarm
3. OSHA approved body safety props

MINIMUM SPECIFICATIONS (continued)

PARTS & SERVICE:

Seller must provide good service either through his/her own company or a reliable dealer furnishing the box and hoist.

WARRANTY & GUARANTEE:

The equipment shall be fully guaranteed against defects in parts and workmanship for a minimum of 12 months. Warranty period to begin on date of in-service, which could be up to one (1) year after delivery.

The Equipment Warranty Form contained in this specification shall be filled out in full. A copy of the manufacturer's warranty shall also be attached to the proposal.

VENDOR MEETING:

A meeting between Brown County and the successful vendor shall be set up at the Brown County Public Works Department, 2198 Glendale Avenue, Green Bay, within three (3) days of the award of this proposal.

GENERAL:

Specific questions on the dump body, hydraulic system and salt spreader controls should be directed to Fleet Manager Jim Beaupre at (920) 662-2177.

SPECIFICATION DATA SHEET

In the space provided hereinafter indicate full information requested. Failure to answer the questions will invalidate your quotation.

1. Make and model of proposed dump body: _____
2. Gauge type and yield strength of steel used on the body:
 - (a) Sides: _____
 - (b) Floor: _____
 - (c) Longsill: _____
 - (d) Tailgate: _____
3. Briefly describe frame of body of proposed model (i.e., ribs, supporting members, etc.): _____

4. Describe type, make, & model of the proposed salt spreader control systems: _____

- (b) Is this system guaranteed? ☐ Yes ☐ No If so, for how many hours of operation? _____ hours
5. Hoist:
 - (a) Describe type, make, & model of the proposed hoist: _____

 - (b) Is the hoist twin-arm with a double-acting cylinder? ☐ Yes ☐ No
 - (c) How many tons can the hoist raise? _____ tons
 - (e) Describe hoist warranty: _____

6. (a) Make & model of the hydraulic system: _____
 (b) Make & model of the pump: _____
 (c) Hydraulic pump capacity: _____
 (d) List make & model of the control valves: _____
7. Make & model of vibrator: _____

8. Describe the tailgate locking system: _____

QUOTATION FORM

For furnishing and delivering ONE (1) SINGLE AXLE DUMP BODY, HYDRAULIC SYSTEM, AND SALT SPREADER CONTROLS totally equipped as here before specified, to the Brown County Public Works Department – Highway Garage, 2198 Glendale Avenue, Green Bay, Wisconsin, 54303.

This proposal is submitted by the undersigned in accordance with the specifications, provisions, and manufacturer's printed specifications, which are attached to this proposal.

1. Make & model proposed:

Dump Body: _____

Hydraulic System: _____

2. One (1) Single Axle - Total list price of complete unit proposed:

List Price _____ \$ _____

Discount _____ \$ _____

Total Cost _____ \$ _____

3. Total Net Price: _____ \$ _____

4. Delivery Date: _____

The undersigned submitting this proposal hereby declares and agrees to furnish the equipment as listed herein in accordance with the terms, conditions and requirements of the within and foregoing proposal and specifications.

PROPOSAL SUBMITTED BY:

Company Name: _____

Company Address: _____

Phone Number: _____

Representative Name & Title *(please print or type)*: _____

Representative Signature: _____ Date: _____

Witness Signature & Title: _____ Date: _____

EQUIPMENT WARRANTY FORM

1. Make & model of proposed equipment: _____
2. Number of Units: _____
3. Length of time the warranty is in effect: _____ Days / Hours / Years
4. What part(s) on the delivered equipment **will not** be covered by such warranty: _____

5. Does the warranty cover replacement parts only? ☐ Yes ☐ No

(a) If yes, does warranty cover just the replacement of parts F.O.B. Brown County Highway Department, Green Bay, Wisconsin? ☐ Yes ☐ No

(b) If yes, does warranty cover the replacement of the parts and all labor to make such replacement at no cost to Brown County? ☐ Yes ☐ No

If such replacement parts and all labor necessary for making such replacement is covered in the warranty at no cost to Brown County, will such work be performed by the quoter's mechanic in Brown County Highway Shop, Green Bay, Wisconsin? ☐ Yes ☐ No

If not, name & address in which such work will be performed: _____

6. Name and location of 24-hour parts/service: _____

7. General Remarks - Pertinent to the conditions of the warranty given: _____

*** Successful quoter shall furnish a warranty covering the abovementioned equipment complete as contained in this proposal and as quoted. Warranty shall cover and protect Brown County against faulty material and workmanship on any and all parts on equipment as delivered.

THIS WARRANTY IS A SUPPLEMENT TO AND SUPERSEDES THE MANUFACTURER'S WARRANTY

SIGNED: (Warranty shall be signed by company President or Secretary)

Company Name: _____

Company Address: _____

Representative Name & Title (please print or type): _____

Representative Signature: _____ Date: _____

Witness Signature & Title: _____ Date: _____